

# Algebra/Topology Seminar

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## THE BESTIARY OF CATALANIMALS: EXPLORING SYMMETRIC FUNCTIONS ACROSS ALGEBRA, COMBINATORICS, AND GEOMETRY

Thursday, October 2, 2025  
3:00 p.m. in Massry B010

ABSTRACT. I will give a survey on a family of symmetric rational functions, called Catalanimals, which serve as a medium between algebra, geometry, and combinatorics. Through these connections, Catalanimals provide a uniform approach to several longstanding conjectures in symmetric function theory. I will give background on these functions and highlight how they tie together algebraic, geometric, and combinatorial ideas. The talk will emphasize the broader picture across areas, with concrete examples accessible to a wide audience.